

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Cancelled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Cancelled)

13. (Canceled)

14. (Canceled)

15. (Cancelled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (New) A fuel cell arrangement comprising:

a first electrode comprised of first and second directly adjacent and separate stacked plates held together by a common first seal element of polymer material,

each of the first and second plates being provided with an opening and the common first seal element extending through the opening in each of the first and second plates;

a second electrode comprised of third and fourth directly adjacent and separate stacked plates held together by a common second seal element of polymer material, each of the third and fourth plates being provided with an opening and the common second seal element extending through the opening in each of the third and fourth plates;

a first catalyst plate and a second catalyst plate both positioned between the first electrode and the second electrode, the first catalyst plate directly contacting the second plate of the first electrode, and the second catalyst plate directly contacting the third plate of the second electrode;

a first membrane positioned between the first catalyst plate and the second catalyst plate;

a third electrode comprised of fifth and sixth directly adjacent and separate stacked plates held together by a common third seal element of polymer material, each of the fifth and sixth plates being provided with an opening and the common third seal element extending through the opening in each of the fifth and sixth plates;

a third catalyst plate and a fourth catalyst plate positioned between the second electrode and the third electrode, the third catalyst plate directly contacting the fourth plate of the second electrode, and the fourth catalyst plate directly contacting the fifth plate of the third electrode;

a second membrane positioned between the third catalyst plate and the fourth catalyst plate; and

wherein there are no catalyst plates and no membranes positioned between:

1) the first and second plates of the first electrode; 2) the third and fourth plates of the second electrode; and 3) the fifth and sixth plates of the third electrode.

22. (New) The fuel cell arrangement according to Claim 21, wherein the common first seal element is provided on surfaces of the first and second plates of the first electrode that are opposite the surfaces of the first and second plates that face one another.

23. (New) The fuel cell arrangement according to Claim 21, further comprising a first intermediate space provided between the first and second plates of the first electrode, a second intermediate space provided between the third and fourth plates of the second electrode, and a third intermediate space provided between the fifth and sixth plates of the third electrode, the common first seal element sealing the first intermediate space, the common second seal element sealing the second intermediate space, and the common third seal element sealing the third intermediate space.

24. (New) The fuel cell arrangement according to Claim 21, wherein:
the first and second plates of the first electrode have end faces, the common first seal element encompassing at least portions of the end faces of the first and second plates of the first electrode;

the third and fourth plates of the second electrode have end faces, the common second seal element encompassing at least portions of the end faces of the third and fourth plates of the second electrode; and

the fifth and sixth plates of the third electrode have end faces, the common third seal element encompassing at least portions of the end faces of the fifth and sixth plates of the third electrode.

25. (New) A fuel cell arrangement comprising:

a first electrode comprised of first and second directly adjacent and separate stacked plates held together by a common first seal element of polymer material, each of the first and second plates possessing a first surface and an oppositely facing second surface, the first surface of the first plate facing the first surface of the second plate, the common first seal element encompassing at least a portion of an outer end face of the first plate and at least a portion of an outer end face of the second plate, and the common first seal element extending onto the second surface of the first plate and the second surface of the second plate;

a second electrode comprised of third and fourth directly adjacent and separate stacked plates held together by a common second seal element of polymer material, each of the third and fourth plates possessing a first surface and an oppositely facing second surface, the first surface of the third plate facing the first surface of the fourth plate, the common second seal element encompassing at least a portion of an outer end face of the third plate and at least a portion of an outer end face of the fourth plate, and the common second seal element extending onto the second surface of the third plate and the second surface of the fourth plate;

a first catalyst plate and a second catalyst plate both positioned between the first electrode and the second electrode, the first catalyst plate directly contacting the second plate of the first electrode, and the second catalyst plate directly contacting the third plate of the second electrode;

a first membrane positioned between the first catalyst plate and the second catalyst plate;

a third electrode comprised of fifth and sixth directly adjacent and separate stacked plates held together by a common third seal element of polymer material, each of the fifth and sixth plates possessing a first surface and an oppositely facing second surface, the first surface of the fifth plate facing the first surface of the sixth plate, the common third seal element encompassing at least a portion of an outer end face of the fifth plate and at least a portion of an outer end face of the sixth plate, and the common third seal element extending onto the second surface of the fifth plate and the second surface of the sixth plate;

a third catalyst plate and a fourth catalyst plate positioned between the second electrode and the third electrode, the third catalyst plate directly contacting the fourth plate of the second electrode, and the fourth catalyst plate directly contacting the fifth plate of the third electrode;

a second membrane positioned between the third catalyst plate and the fourth catalyst plate; and

wherein there are no catalyst plates and no membranes positioned between:
1) the first and second plates of the first electrode; 2) the third and fourth plates of the second electrode; and 3) the fifth and sixth plates of the third electrode.

26. (New) The fuel cell arrangement according to Claim 25, wherein at least a portion of the first common seal element that extends onto the second surface of the second plate contacts at least a portion of the second common seal element that extends onto the second surface of the third plate.

27. (New) A fuel cell module adapted to be positioned adjacent another fuel cell module with an interposed membrane to form a fuel cell arrangement, the fuel cell module comprising:

an electrode comprised of first and second separate and stacked plates each having a first surface and a second surface, at least a portion of the first surface of the first plate being directly adjacent at least a portion of the first surface of the second plate;

a common seal element of polymer material which at least partially joins the first and second separate and stacked plates to one another, each of the first and second plates being provided with an opening and the common seal element extending through the opening in each of the first and second plates;

a first catalyst plate directly contacting the second surface of the first plate of the electrode;

a second catalyst plate directly contacting the second surface of the second plate of the electrode; and

wherein there are no catalyst plates positioned between the first surface of the first plate and the first surface of the second plate of the electrode.

28. (New) The fuel cell module according to Claim 27, wherein the common seal element adhesively joins the first and second plates of the electrode to one another.

29. (New) The fuel cell module according to Claim 27, wherein the first and second plates of the electrode are joined to one another in an interlocking manner via the common seal element.

30. (New) The fuel cell module according to Claim 27, wherein the common seal element is provided on the second surfaces of the first and second plates of the electrode.

31. (New) The fuel cell module according to Claim 27, further comprising an intermediate space between a portion of the first surface of the first plate and a portion of the first surface of the second plate, the common seal element sealing the intermediate space.

32. (New) The fuel cell module according to Claim 27, wherein the first and second plates of the electrodes have end faces, the common seal element encompassing at least portions of the end faces of the first and second plates of the electrode.

33. (New) The fuel cell module according to Claim 27, wherein the first and second plates of the electrode are each provided with a plurality of elongated

openings, each of the openings in one of the plates overlapping one of the openings in the other plate.

34. (New) The fuel cell module according to Claim 27, wherein a portion of the seal element is positioned in at least cavity between the first and second plates of the electrode.

35. (New) The fuel cell module according to Claim 27, wherein a part of the common seal element is located on a side of one of the first and second plates of the electrode and has a cross-sectional configuration possessing a flat surface.

36. (New) The fuel cell module according to Claim 27, wherein a part of the common seal element is located on a side of one of the first and second plates of the electrode and has a cross-sectional configuration possessing a tapering surface.

37. (New) The fuel cell module according to Claim 27, wherein a part of the common seal element is located on a side of one of the first and second plates of the electrode and has a cross-sectional configuration possessing both a flat surface and a tapering surface.

38. (New) The fuel cell module according to Claim 37, wherein the flat surface is separated from the tapering surface by a recess which is recessed relative to the flat surface.

39. (New) A fuel cell module adapted to be positioned adjacent another fuel cell module with an interposed membrane to form a fuel cell arrangement, the fuel cell module comprising:

an electrode comprised of first and second separate and stacked plates each having a first surface and a second surface, at least a portion of the first surface of the first plate being directly adjacent at least a portion of the first surface of the second plate;

a common seal element of polymer material which holds the first and second separate and stacked plates to one another, the common seal element encompassing at least a portion of an outer end face of the first plate and at least a portion of an outer end face of the second plate, and the common seal element extending onto the second surface of the first plate and the second surface of the second plate;

a first catalyst plate directly contacting the second surface of the first plate of the electrode;

a second catalyst plate directly contacting the second surface of the second plate of the electrode; and

wherein there are no catalyst plates positioned between the first surface of the first plate and the first surface of the second plate of the electrode.

40. (New) A process for producing a fuel cell module for a fuel cell arrangement, comprising:

inserting into a casting mold at least portions of first and second separate plates having first surfaces facing one another and oppositely facing second surfaces, each of the first and second plates being provided with an opening;

filling the casting mold with a polymer seal material so that the seal material adjoins the first and second plates and forms a common seal element extending through the opening in each of the first and second plates while the first surfaces of the first and second plates are directly adjacent one another to hold together the first and second separate plates and produce a single electrode of the fuel cell module for the fuel cell arrangement;

directly contacting the second surface of the first plate with a first catalyst plate;

directly contacting the second surface of the second plate with a second catalyst plate; and

wherein there are no catalyst plates between the first surfaces of the first and second plates of the single electrode.